

FIG. 1

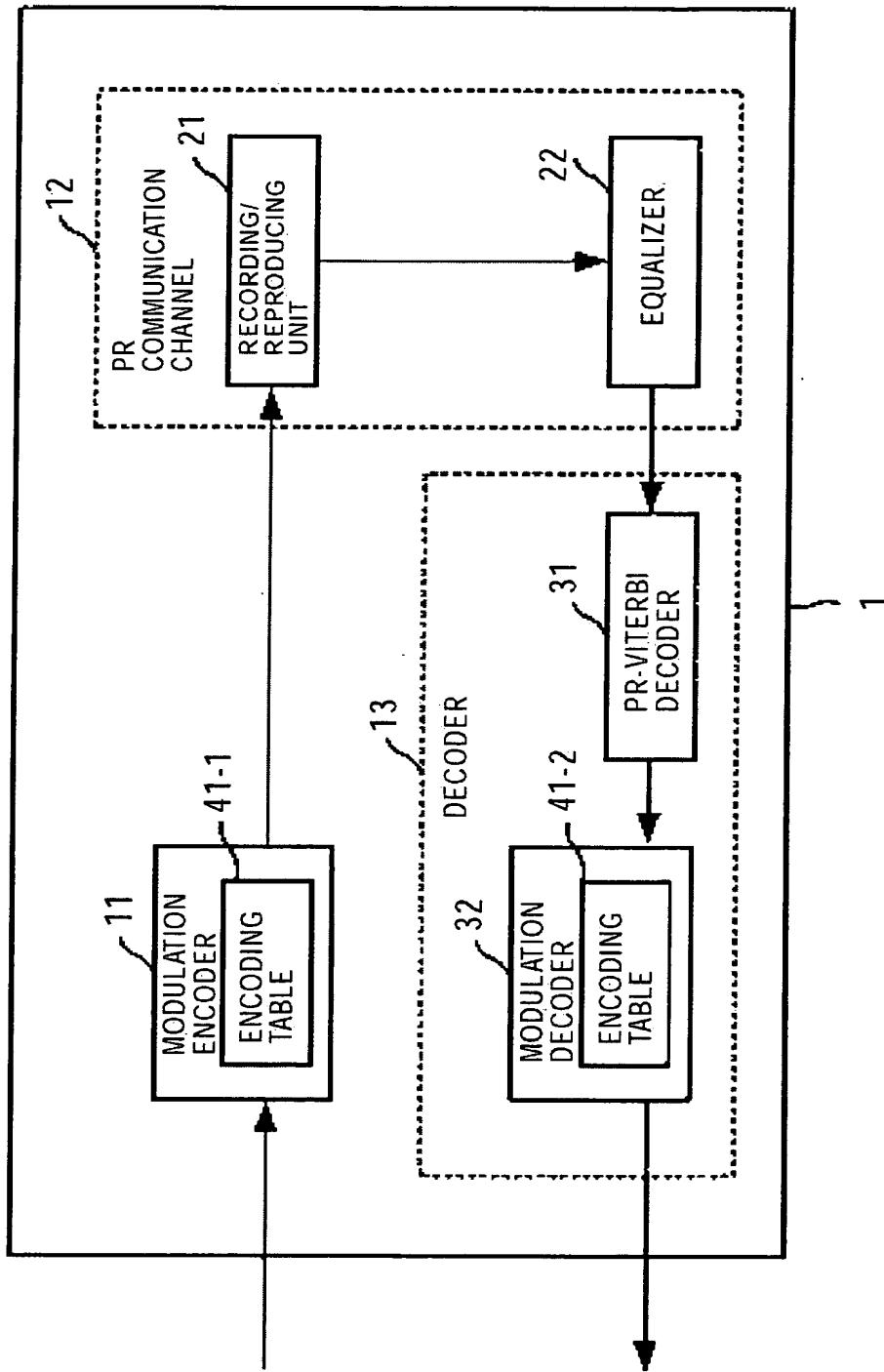
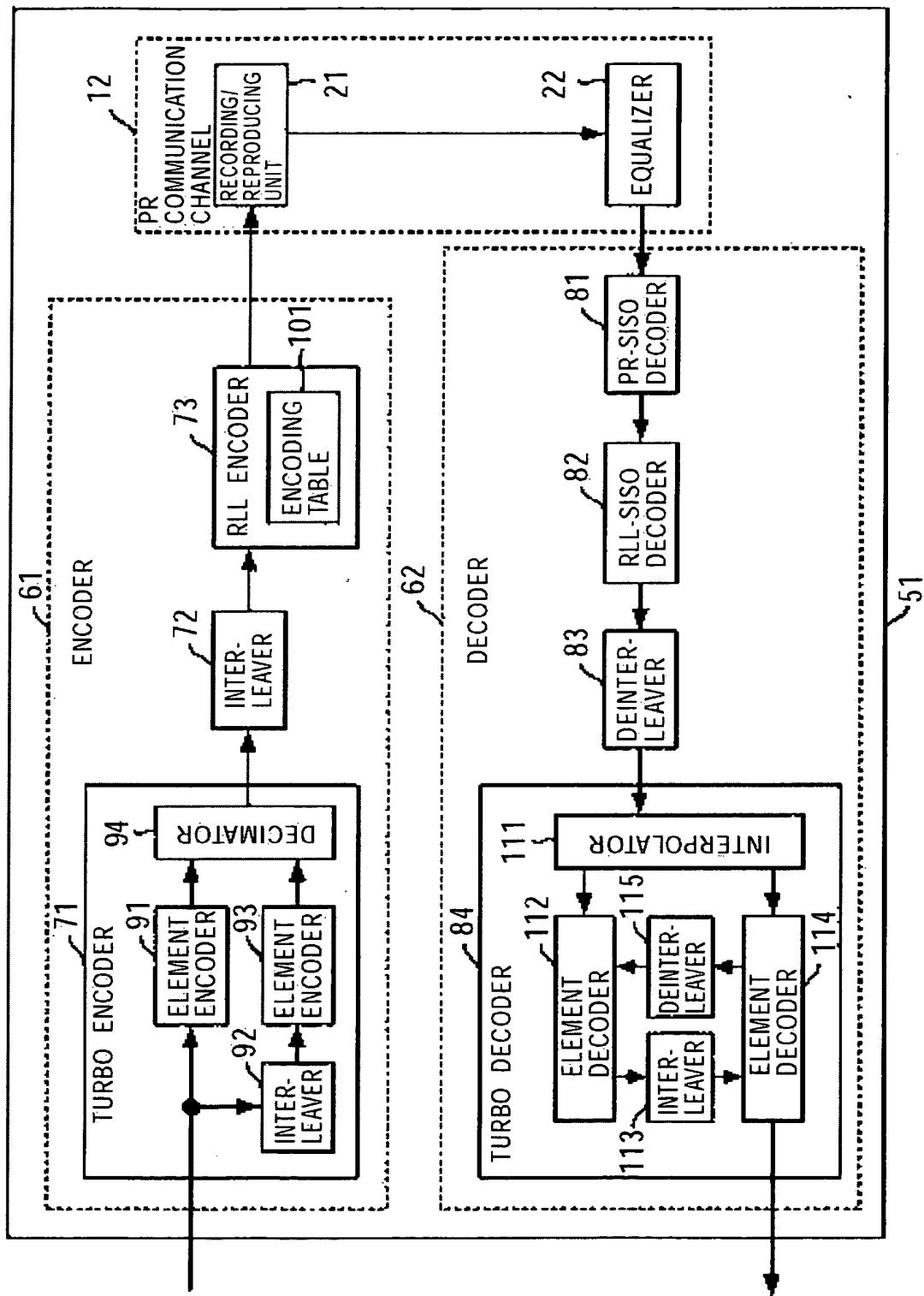


FIG. 2



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FIG. 3

PREVIOUS TIME STATE	PREVIOUS TIME OUTPUT	PREVIOUS TIME INPUT	CURRENT- TIME OUTPUT	CURRENT- TIME INPUT	CURRENT- TIME STATE
S0	0	00	001	00	S4
	0	00	001	01	S5
	0	00	000	10	S2
	0	00	000	11	S3
S1	0	01	001	00	S4
	0	01	001	01	S5
	0	01	000	10	S2
	0	01	000	11	S3
S2	0	10	101	00	S4
	0	10	101	01	S5
	0	10	010	10	S2
	0	10	010	11	S3
S3	0	11	010	00	S0
	0	11	100	01	S1
	0	11	100	10	S2
	0	11	100	11	S3
S4	1	00	001	00	S4
	1	00	001	01	S5
	1	00	010	10	S2
	1	00	010	11	S3
S5	1	01	010	00	S0
	1	01	000	01	S1
	1	01	000	10	S2
	1	01	000	11	S3

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FIG. 4

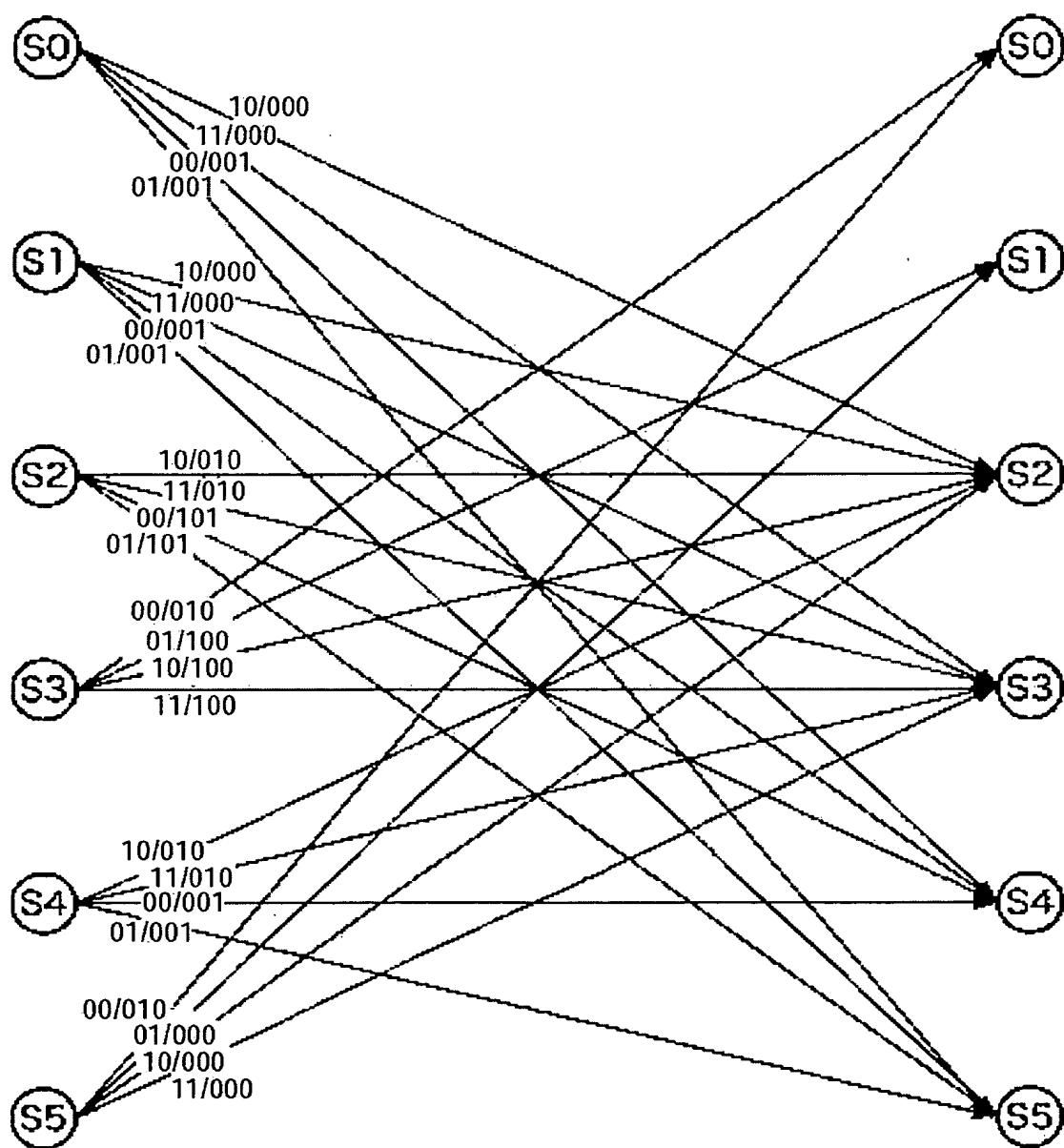
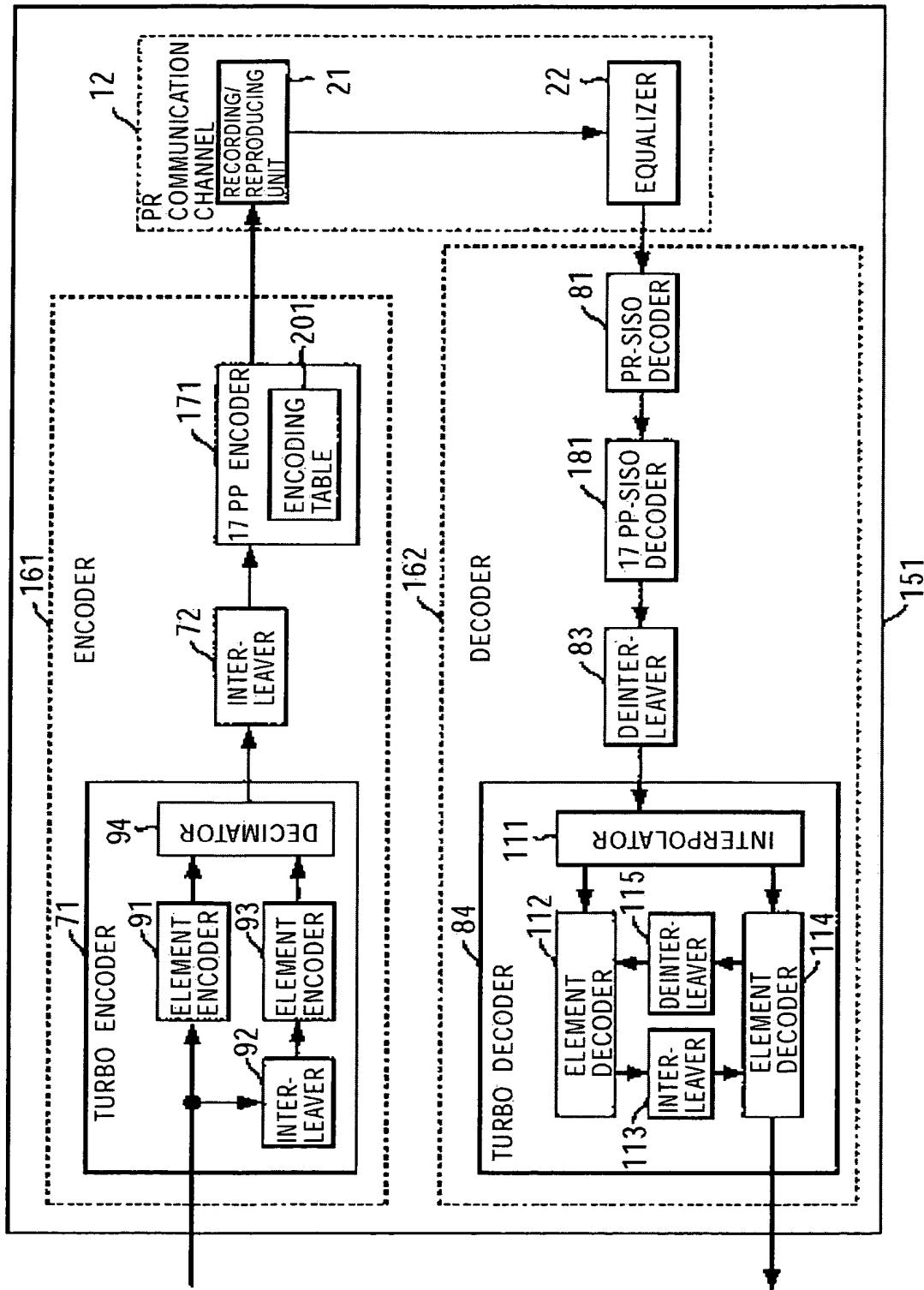


FIG. 5



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FIG. 6

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INPUT BIT STRING	OUTPUT BIT STRING	CONDITION
00 00 00 00	010 100 100 100	
00 00 10 00	000 100 100 100	
00 00 00	010 100 000	
00 00 01	010 100 100	
00 00 10	000 100 000	
00 00 11	000 100 100	
00 01	000 100	
00 10	010 000	
00 11	010 100	
01	010	
10	001	
11	000 101	FINAL PREVIOUS-TIME OUTPUT = 1 FINAL PREVIOUS-TIME OUTPUT = 0

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INPUT BIT STRING TO BE REPLACED	BIT STRING OUTPUT AS A RESULT OF REPLACEMENT	CONDITION FOR REPLACEMENT
11 01 11	001 000 000	NEXT-TIME OUTPUT BIT STRING = 010

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FIG. 7

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
S0	01	S1	010
S0	10	S0	001
S0	00	S4	000
S0	00	S5	010
S0	00	S8	010
S0	00	S6	010
S0	00	S9	000
S0	00	S7	000
S0	11	S3	000
S0	11	S16	001
S1	01	S1	010
S1	10	S0	001
S1	00	S4	000
S1	00	S5	010
S1	00	S8	010
S1	00	S6	010
S1	00	S9	000
S1	00	S7	000
S1	11	S2	101
S1	11	S16	001
S2	01	S17	010
S2	10	S0	001
S2	00	S4	000
S2	00	S5	010
S2	00	S8	010
S2	00	S6	010
S2	00	S9	000
S2	00	S7	000
S2	11	S3	000
S2	11	S16	001

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FIG. 8

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
S3	01	S17	010
S3	10	S0	001
S3	00	S4	000
S3	00	S5	010
S3	00	S8	010
S3	00	S6	010
S3	00	S9	000
S3	00	S7	000
S3	11	S2	101
S3	11	S16	001
S4	01	S1	100
S5	10	S1	000
S5	11	S1	100
S6	00	S10	100
S7	00	S11	100
S8	00	S12	100
S9	00	S13	100
S10	01	S1	100
S11	11	S1	100
S12	00	S14	100
S12	00	S15	000
S13	10	S14	100
S13	10	S15	000
S14	00	S1	100
S15	01	S1	010
S15	10	S0	001
S15	11	S2	101
S15	11	S16	001
S16	01	S18	000

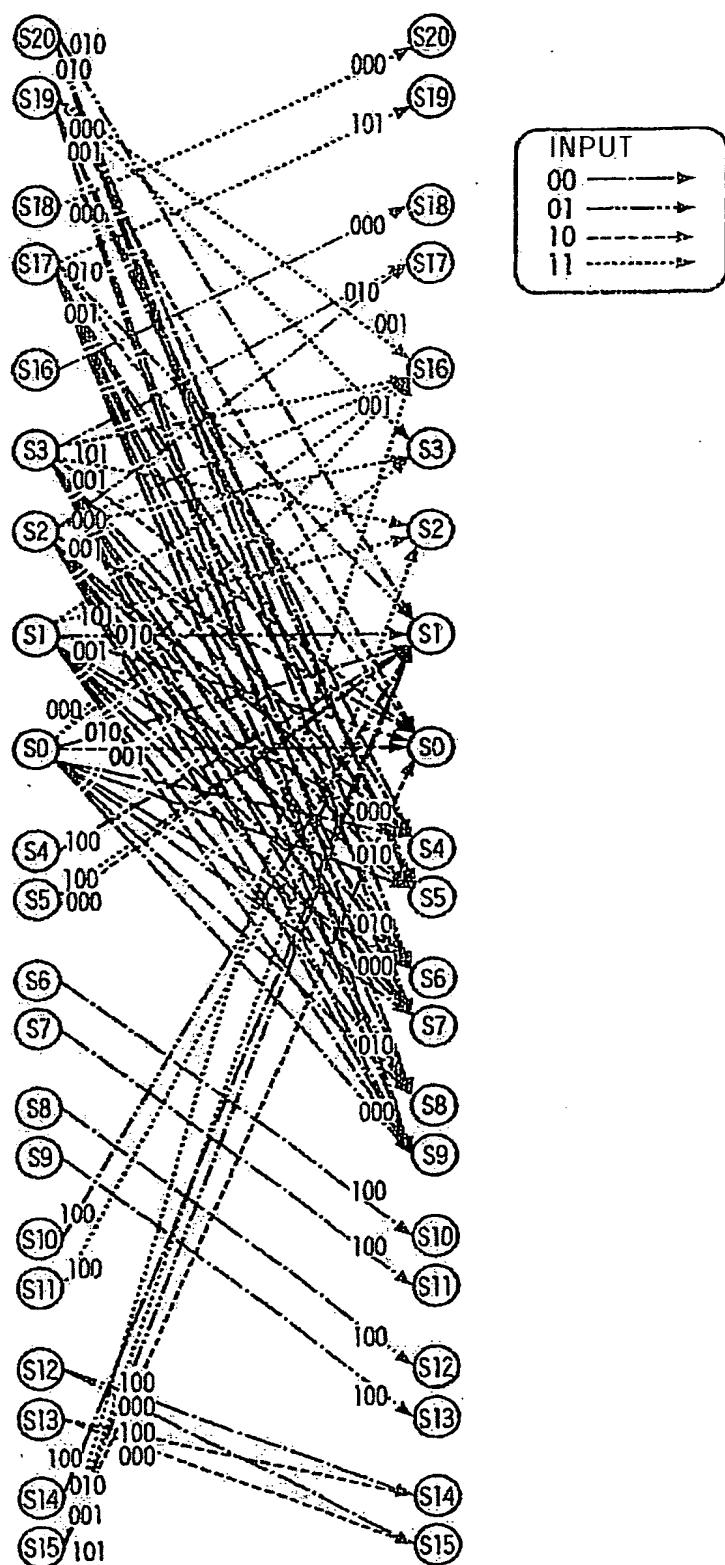
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FIG. 9

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
S17	01	S1	010
S17	10	S0	001
S17	11	S19	101
S17	00	S4	000
S17	00	S5	010
S17	00	S8	010
S17	00	S6	010
S17	00	S9	000
S17	00	S7	000
S18	11	S20	000
S19	10	S0	001
S19	00	S4	000
S19	00	S9	000
S19	00	S7	000
S19	11	S3	000
S19	11	S16	001
S20	01	S1	010
S20	00	S5	010
S20	00	S8	010
S20	00	S6	010

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FIG. 10

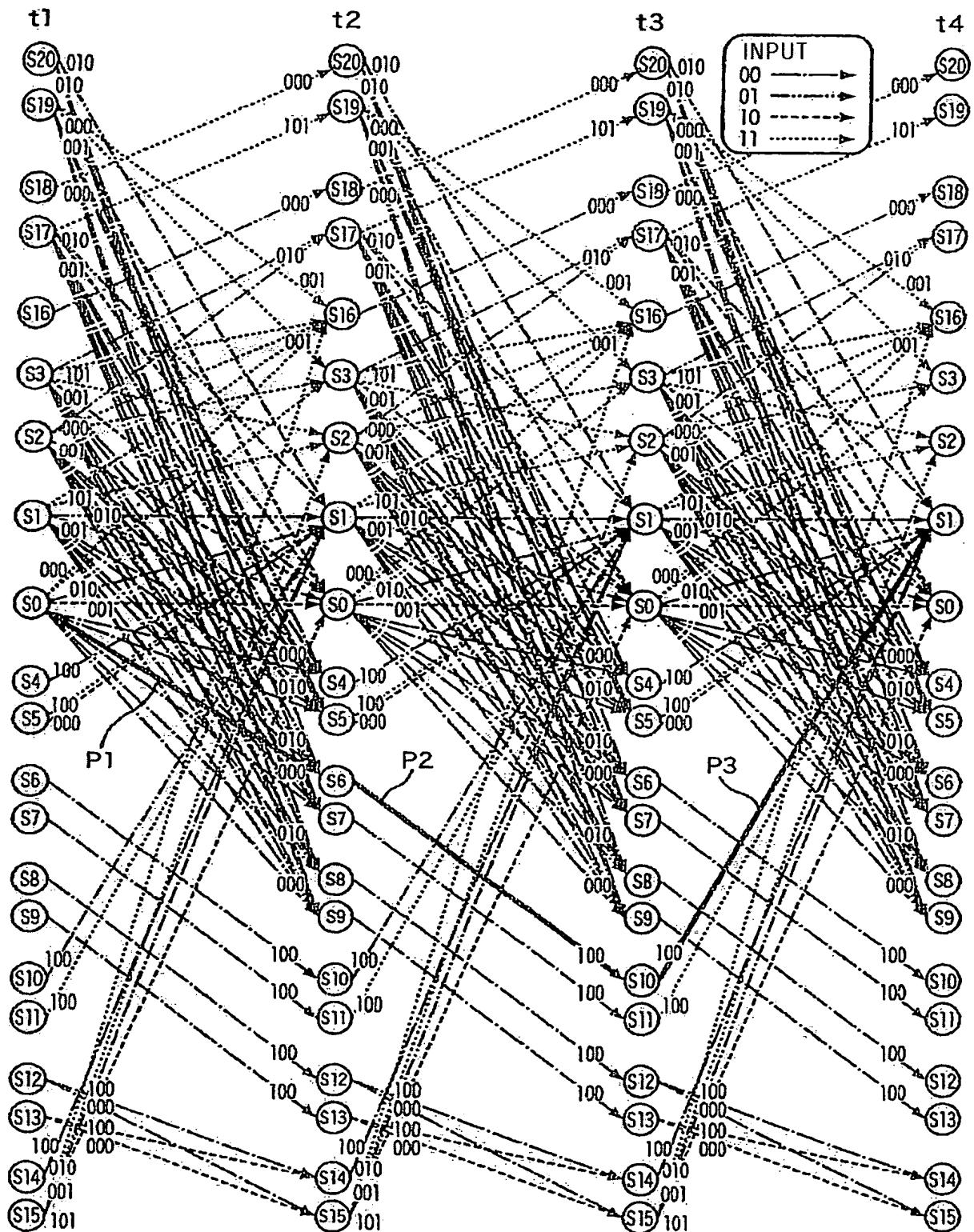


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FIG. 11



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FIG. 12

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
S0	01	S1	010
S0	10	S0	001
S0	00	S5	000
S0	00	S4	010
S0	11	S3	000
S0	11	S10	001
S1	01	S1	010
S1	10	S0	001
S1	00	S5	000
S1	00	S4	010
S1	11	S2	101
S1	11	S10	001
S2	01	S11	010
S2	10	S0	001
S2	00	S5	000
S2	00	S4	010
S2	11	S3	000
S2	11	S10	001
S3	01	S11	010
S3	10	S0	001
S3	00	S5	000
S3	00	S4	010
S3	11	S2	101
S3	11	S10	001
S4	00	S6	100
S4	10	S1	000
S4	11	S1	100

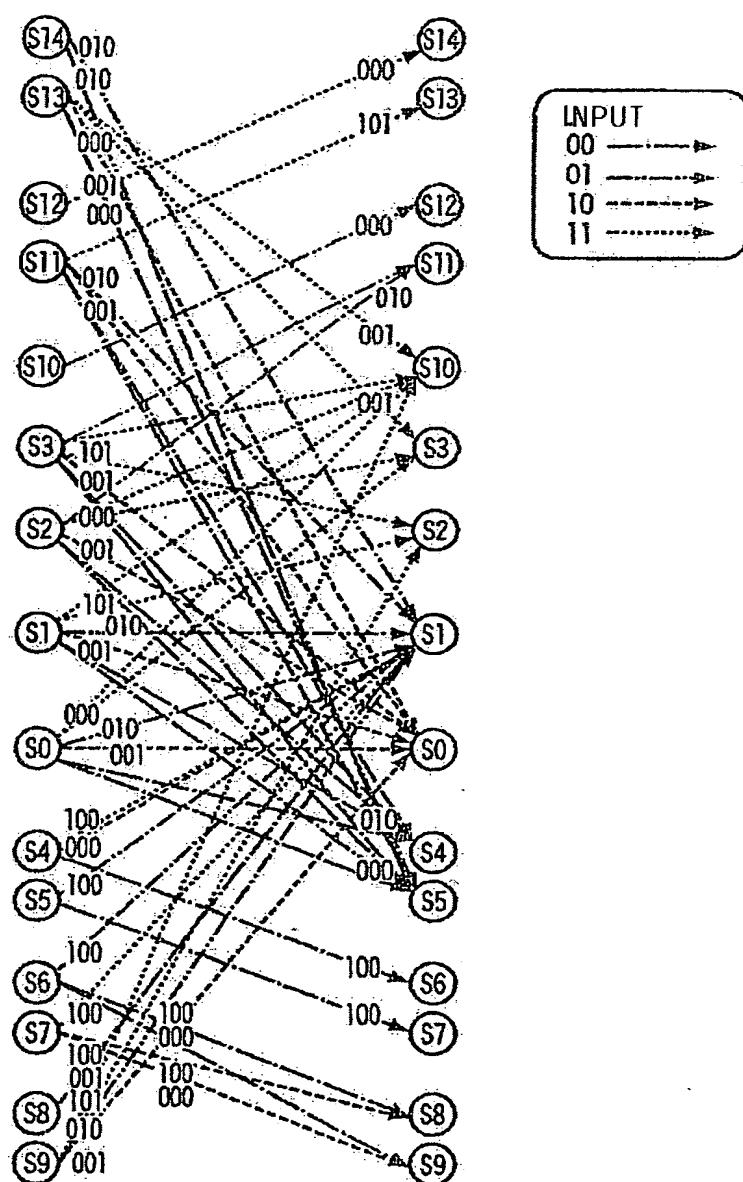
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FIG. 13

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
S5	00	S7	100
S5	01	S1	100
S6	01	S1	100
S6	00	S8	100
S6	00	S9	000
S7	11	S1	100
S7	10	S8	100
S7	10	S9	000
S8	00	S1	100
S9	01	S1	010
S9	10	S0	001
S9	11	S2	101
S9	11	S10	001
S10	01	S12	000
S11	01	S1	010
S11	10	S0	001
S11	11	S13	101
S11	00	S5	000
S11	00	S4	010
S12	11	S14	000
S13	10	S0	001
S13	00	S5	000
S13	11	S3	000
S13	11	S10	001
S14	01	S1	010
S14	00	S4	010

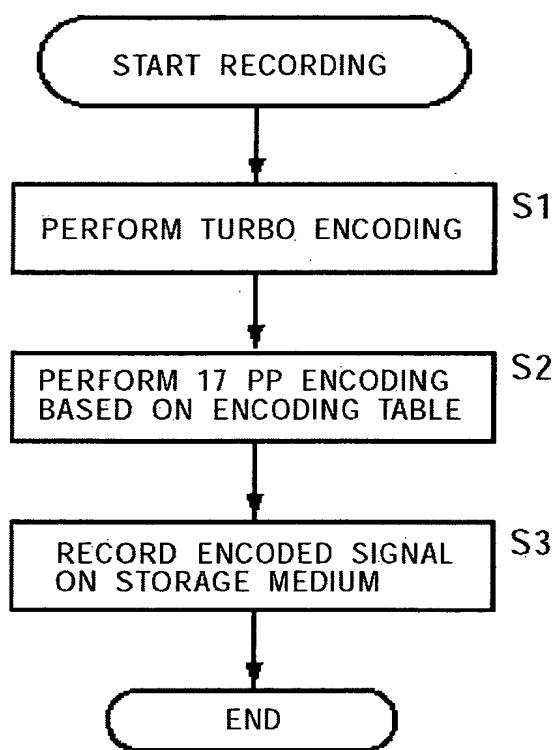
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FIG. 14



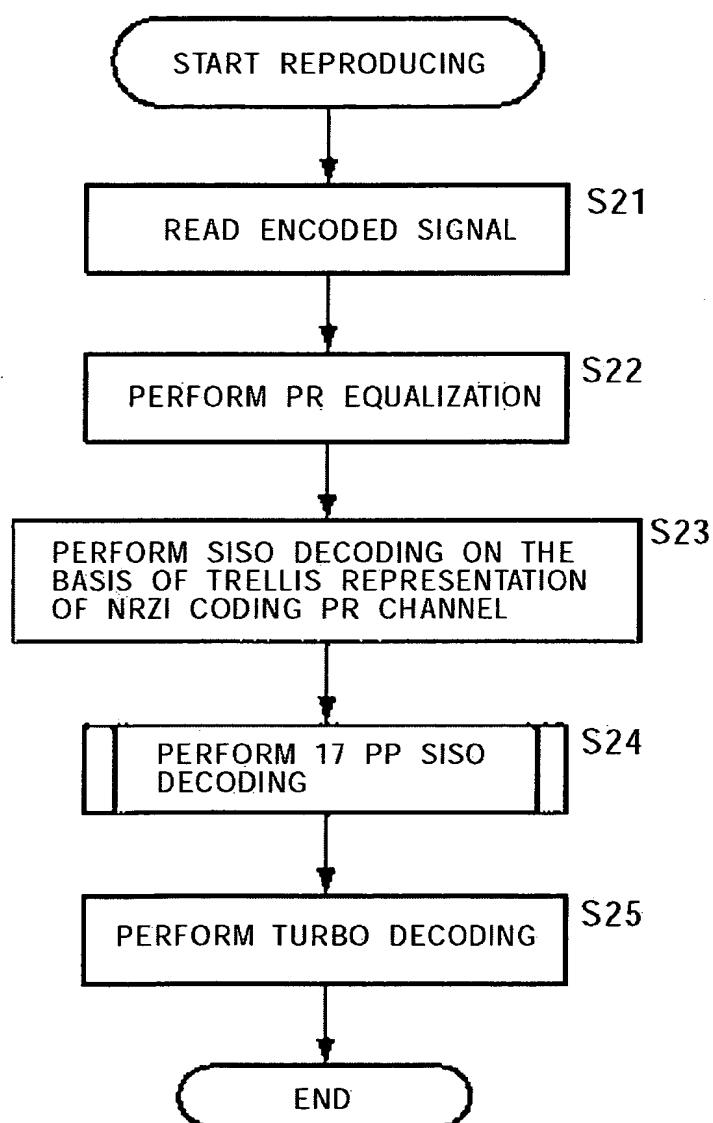
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FIG. 15



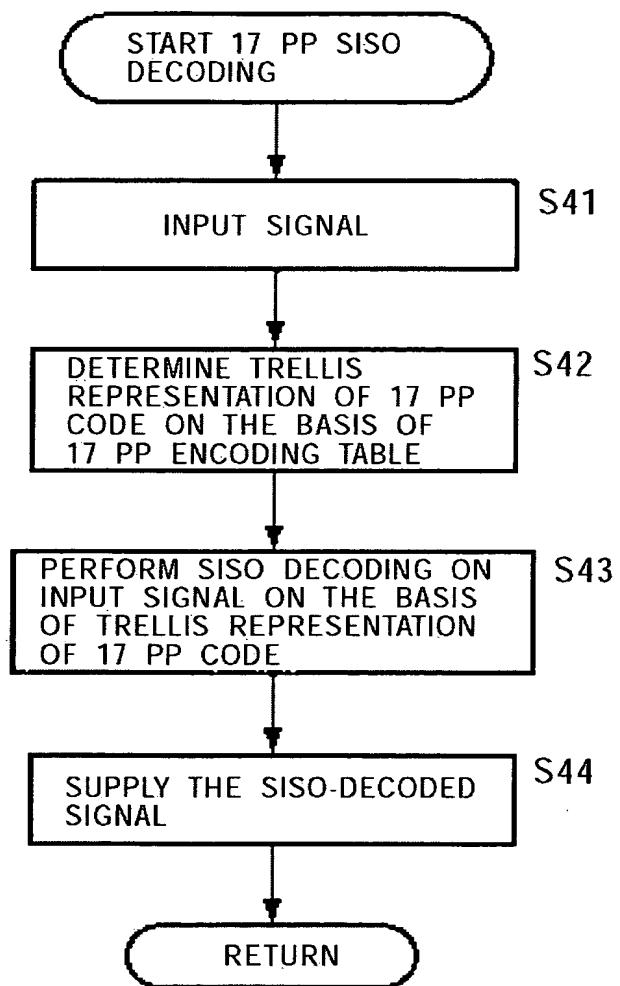
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FIG. 16



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FIG. 17



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FIG. 18

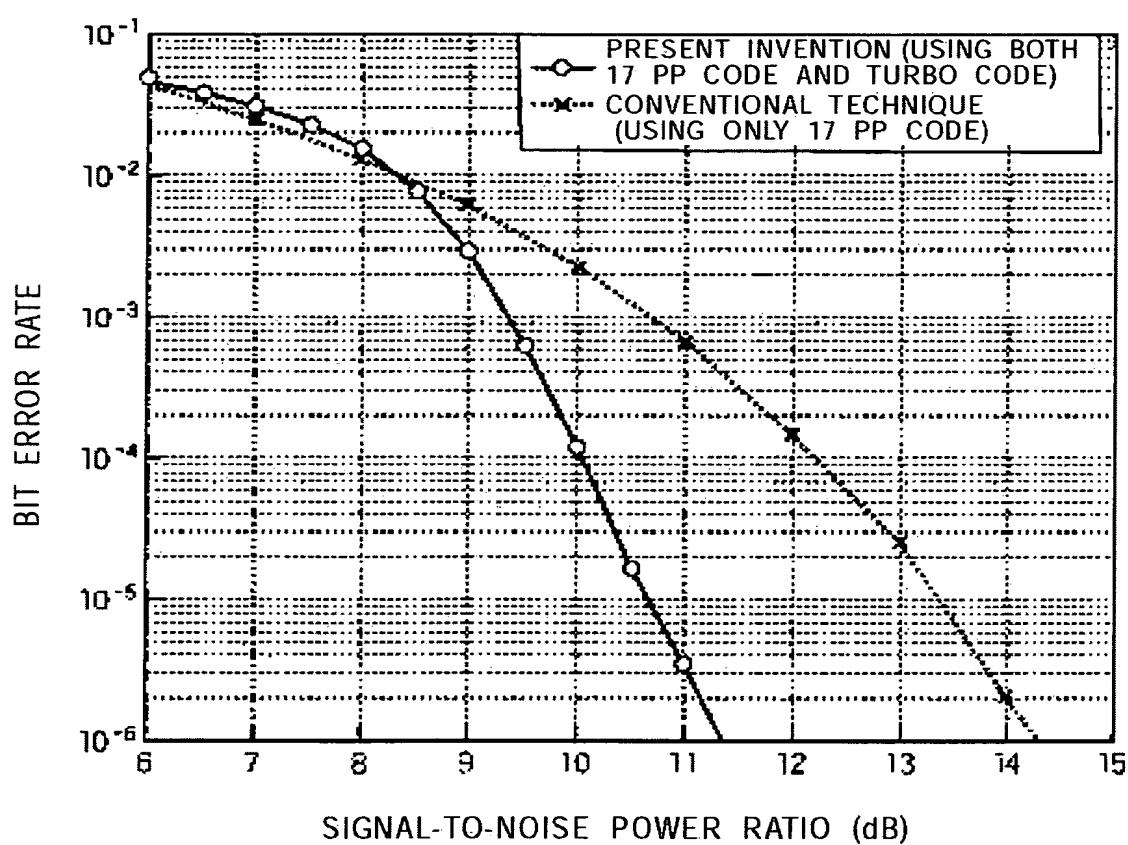


FIG. 19

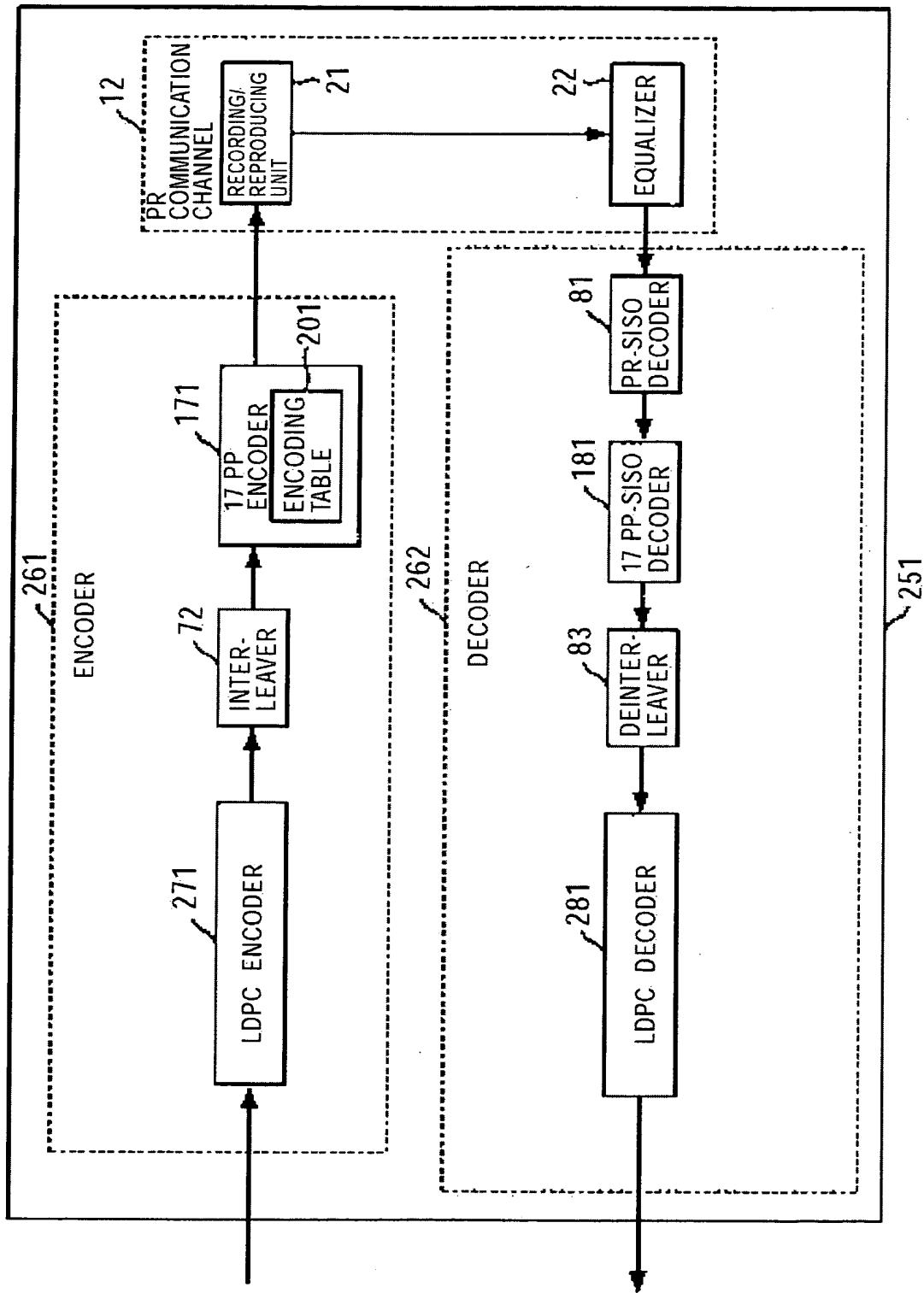


FIG. 20

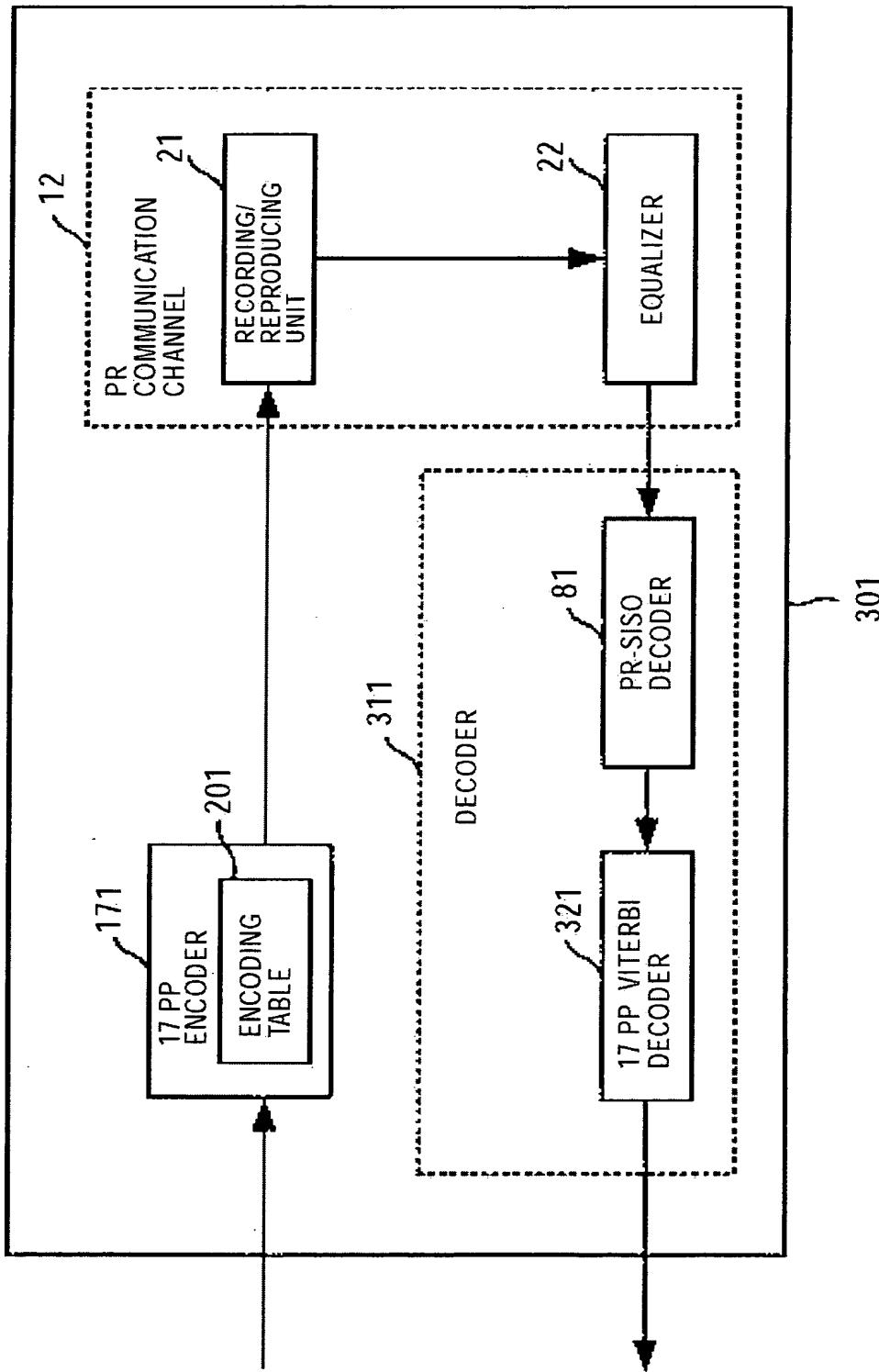


FIG. 21

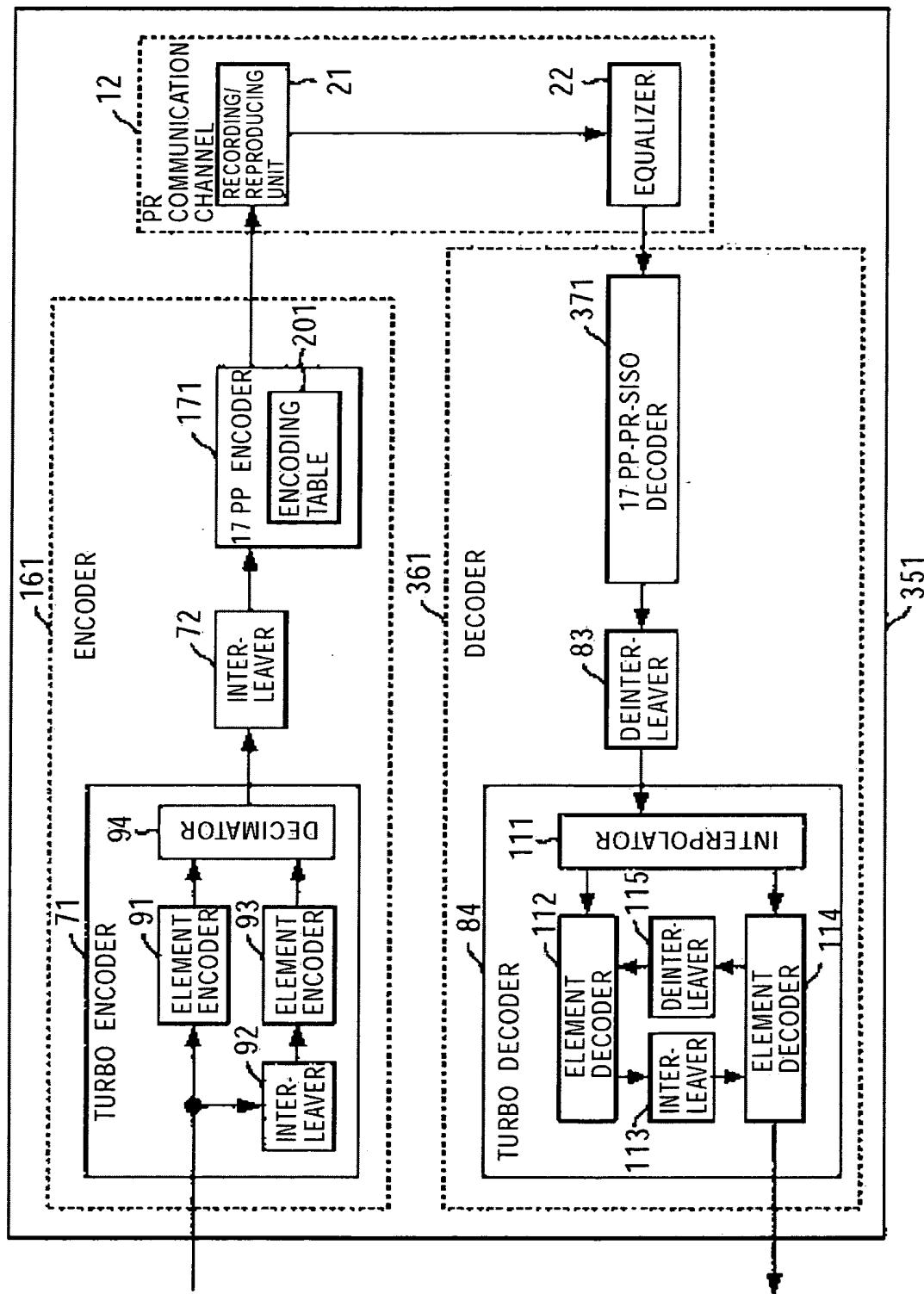


FIG. 22

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT	CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
(0, 1)	01	(1, 3)	0,2,0	(1, 5)	01	(1, 3)	6,4,0
(0, 1)	10	(0, 4)	0,4,4	(1, 5)	10	(0, 4)	6,6,4
(0, 1)	00	(5, 5)	0,4,6	(1, 5)	00	(5, 5)	6,6,6
(0, 1)	00	(4, 3)	0,2,0	(1, 5)	00	(4, 3)	6,4,0
(0, 1)	11	(3, 5)	0,4,6	(1, 5)	11	(2, 1)	4,0,-2
(0, 1)	11	(10, 4)	0,4,4	(1, 5)	11	(10, 4)	6,6,4
(0, 4)	01	(1, 2)	0,-2,0	(2, 1)	01	(11, 3)	0,2,0
(0, 4)	10	(0, 1)	0,-4,-4	(2, 1)	10	(0, 4)	0,4,4
(0, 4)	00	(5, 0)	0,-4,-6	(2, 1)	00	(5, 5)	0,4,6
(0, 4)	00	(4, 2)	0,-2,0	(2, 1)	00	(4, 3)	0,2,0
(0, 4)	11	(3, 0)	0,-4,-6	(2, 1)	11	(3, 5)	0,4,6
(0, 4)	11	(10, 1)	0,-4,-4	(2, 1)	11	(10, 4)	0,4,4
(1, 0)	01	(1, 2)	-6,-4,0	(2, 4)	01	(11, 2)	0,-2,0
(1, 0)	10	(0, 1)	-6,-6,-4	(2, 4)	10	(0, 1)	0,-4,-4
(1, 0)	00	(5, 0)	-6,-6,-6	(2, 4)	00	(5, 0)	0,-4,-6
(1, 0)	00	(4, 2)	-6,-4,0	(2, 4)	00	(4, 2)	0,-2,0
(1, 0)	11	(2, 4)	-4,0,2	(2, 4)	11	(3, 0)	0,-4,-6
(1, 0)	11	(10, 1)	-6,-6,-4	(2, 4)	11	(10, 1)	0,-4,-4
(1, 2)	01	(1, 3)	4,4,0	(3, 0)	01	(11, 2)	-6,-4,0
(1, 2)	10	(0, 4)	4,6,4	(3, 0)	10	(0, 1)	-6,-6,-4
(1, 2)	00	(5, 5)	4,6,6	(3, 0)	00	(5, 0)	-6,-6,-6
(1, 2)	00	(4, 3)	4,4,0	(3, 0)	00	(4, 2)	-6,-4,0
(1, 2)	11	(2, 1)	2,0,-2	(3, 0)	11	(2, 4)	-4,0,2
(1, 2)	11	(10, 4)	4,6,4	(3, 0)	11	(10, 1)	-6,-6,-4
(1, 3)	01	(1, 2)	-4,-4,0	(3, 5)	01	(11, 3)	6,4,0
(1, 3)	10	(0, 1)	-4,-6,-4	(3, 5)	10	(0, 4)	6,6,4
(1, 3)	00	(5, 0)	-4,-6,-6	(3, 5)	00	(5, 5)	6,6,6
(1, 3)	00	(4, 2)	-4,-4,0	(3, 5)	00	(4, 3)	6,4,0
(1, 3)	11	(2, 4)	-2,0,2	(3, 5)	11	(2, 1)	4,0,-2
(1, 3)	11	(10, 1)	-4,-6,-4	(3, 5)	11	(10, 4)	6,6,4

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FIG. 23

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT	CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
(4, 2)	00	(6, 0)	2,0,-4	(9, 5)	10	(0, 4)	6,6,4
(4, 2)	10	(1, 5)	4,6,6	(9, 5)	11	(2, 1)	4,0,-2
(4, 2)	11	(1, 0)	2,0,-4	(9, 5)	11	(10, 4)	6,6,4
(4, 3)	00	(6, 5)	-2,0,4	(10, 1)	01	(12, 5)	0,4,6
(4, 3)	10	(1, 0)	-4,-6,-6	(10, 4)	01	(12, 0)	0,-4,-6
(4, 3)	11	(1, 5)	-2,0,4	(11, 2)	01	(1, 3)	4,4,0
(5, 0)	00	(7, 5)	-4,0,4	(11, 2)	10	(0, 4)	4,6,4
(5, 0)	01	(1, 5)	-4,0,4	(11, 2)	11	(13, 1)	2,0,-2
(5, 5)	00	(7, 0)	4,0,-4	(11, 2)	00	(5, 5)	4,6,6
(5, 5)	01	(1, 0)	4,0,-4	(11, 2)	00	(4, 3)	4,4,0
(6, 0)	01	(1, 5)	-4,0,4	(11, 3)	01	(1, 2)	-4,-4,0
(6, 0)	00	(8, 5)	-4,0,4	(11, 3)	10	(0, 1)	-4,-6,-4
(6, 0)	00	(9, 0)	-6,-6,-6	(11, 3)	11	(13, 4)	-2,0,2
(6, 5)	01	(1, 0)	4,0,-4	(11, 3)	00	(5, 0)	-4,-6,-6
(6, 5)	00	(8, 0)	4,0,-4	(11, 3)	00	(4, 2)	-4,-4,0
(6, 5)	00	(9, 5)	6,6,6	(12, 0)	11	(14, 0)	-6,-6,-6
(7, 0)	11	(1, 5)	-4,0,4	(12, 5)	11	(14, 5)	6,6,6
(7, 0)	10	(8, 5)	-4,0,4	(13, 1)	10	(0, 4)	0,4,4
(7, 0)	10	(9, 0)	-6,-6,-6	(13, 1)	00	(5, 5)	0,4,6
(7, 5)	11	(1, 0)	4,0,-4	(13, 1)	11	(3, 5)	0,4,6
(7, 5)	10	(8, 0)	4,0,-4	(13, 1)	11	(10, 4)	0,4,4
(7, 5)	10	(9, 5)	6,6,6	(13, 4)	10	(0, 1)	0,-4,-4
(8, 0)	00	(1, 5)	-4,0,4	(13, 4)	00	(5, 0)	0,-4,-6
(8, 5)	00	(1, 0)	4,0,-4	(13, 4)	11	(3, 0)	0,-4,-6
(9, 0)	01	(1, 2)	-6,-4,0	(13, 4)	11	(10, 1)	0,-4,-4
(9, 0)	10	(0, 1)	-6,-6,-4	(14, 0)	01	(1, 2)	-6,-4,0
(9, 0)	11	(2, 4)	-4,0,2	(14, 0)	00	(4, 2)	-6,-4,0
(9, 0)	11	(10, 1)	-6,-6,-4	(14, 5)	01	(1, 3)	6,4,0
(9, 5)	01	(1, 3)	6,4,0	(14, 5)	00	(4, 3)	6,4,0

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FIG. 24

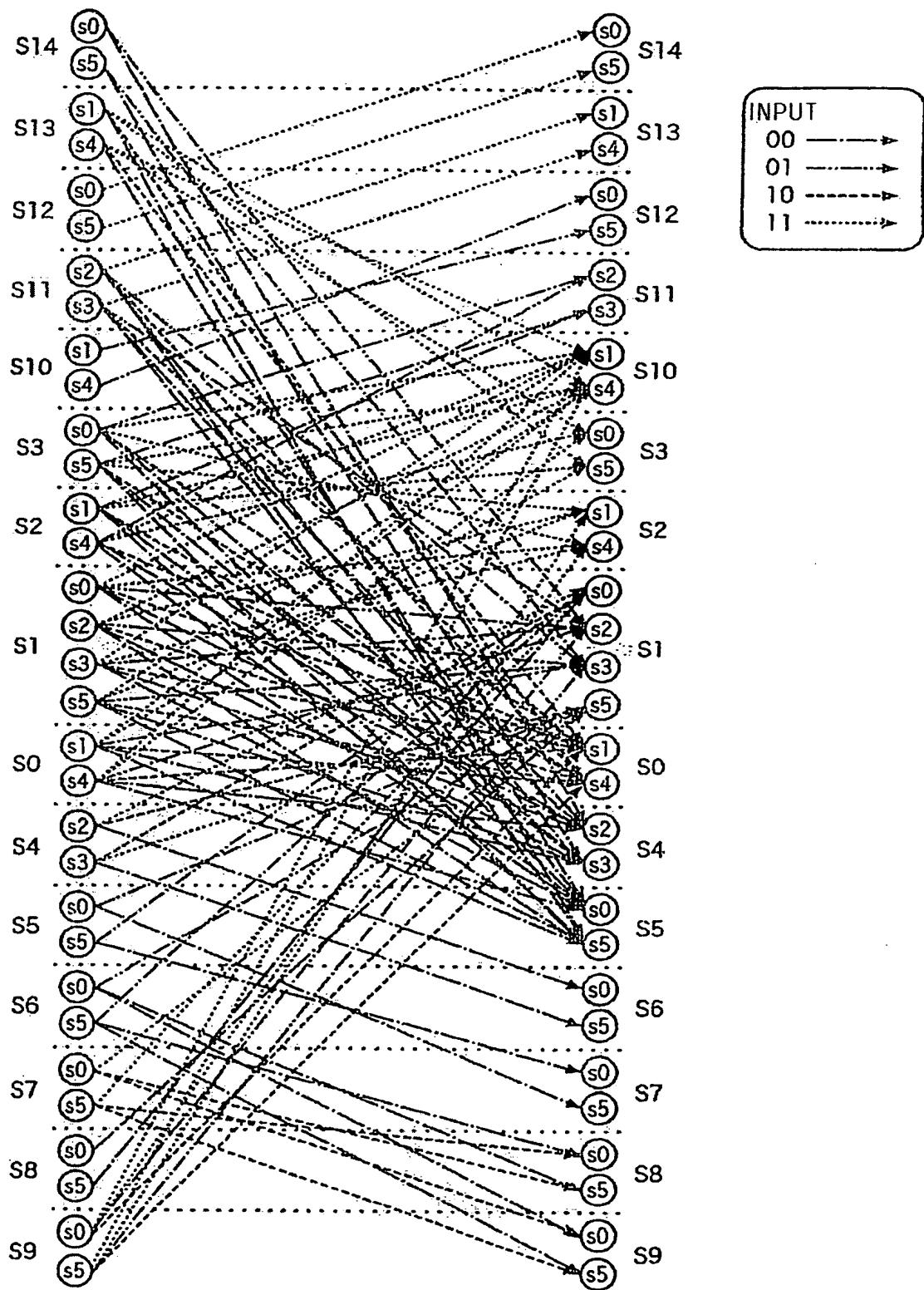
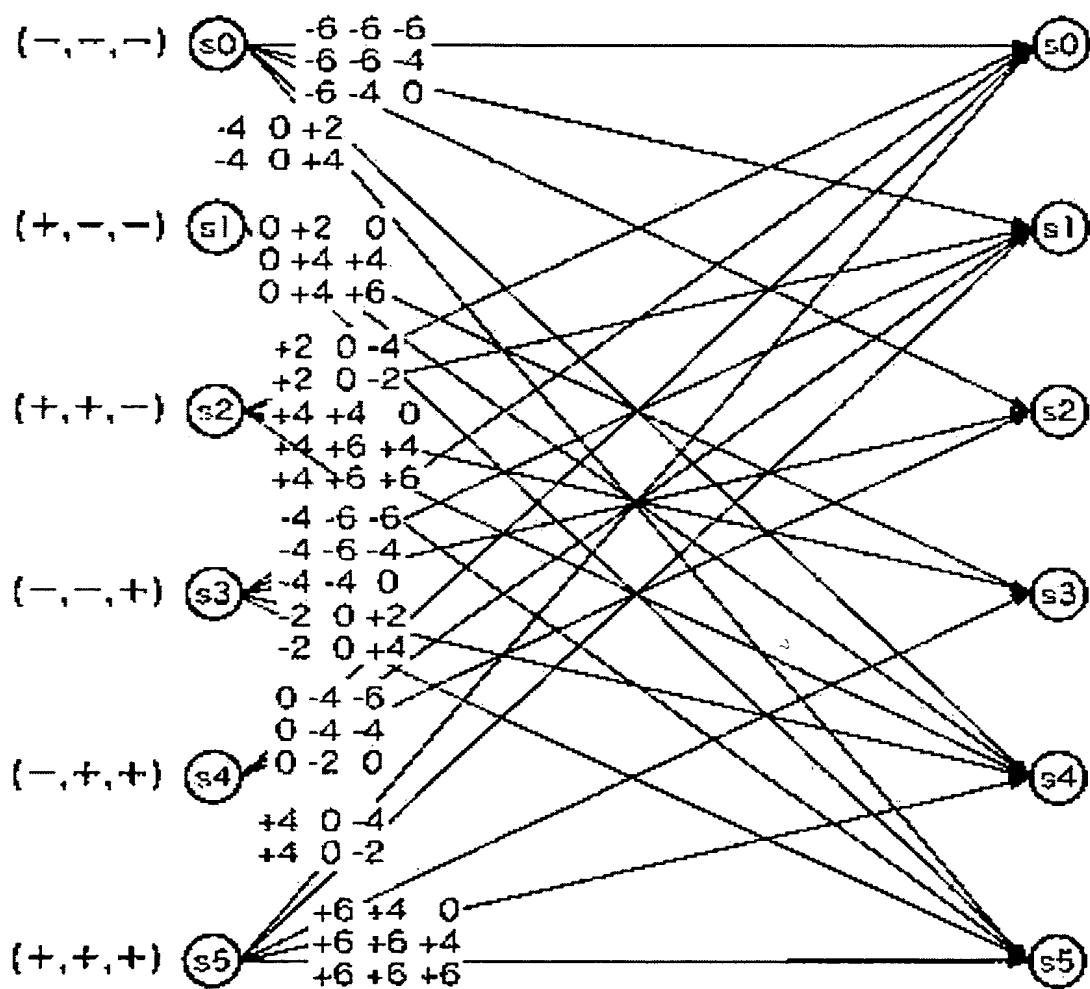
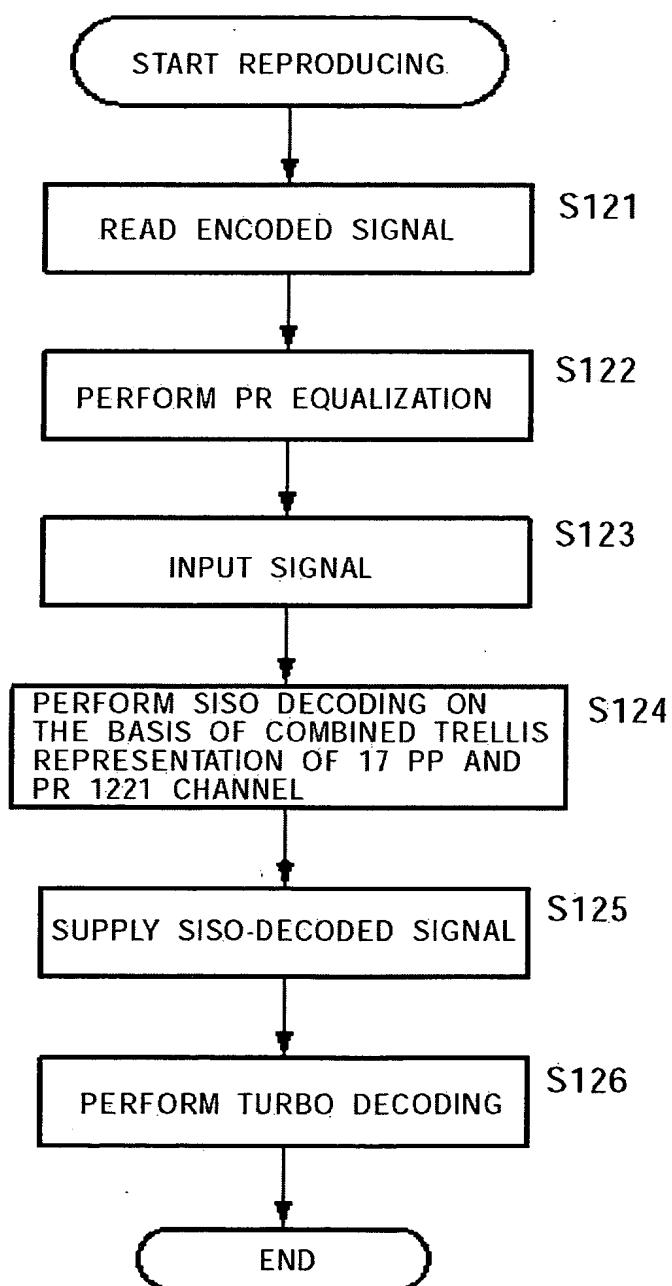


FIG. 25



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FIG. 26

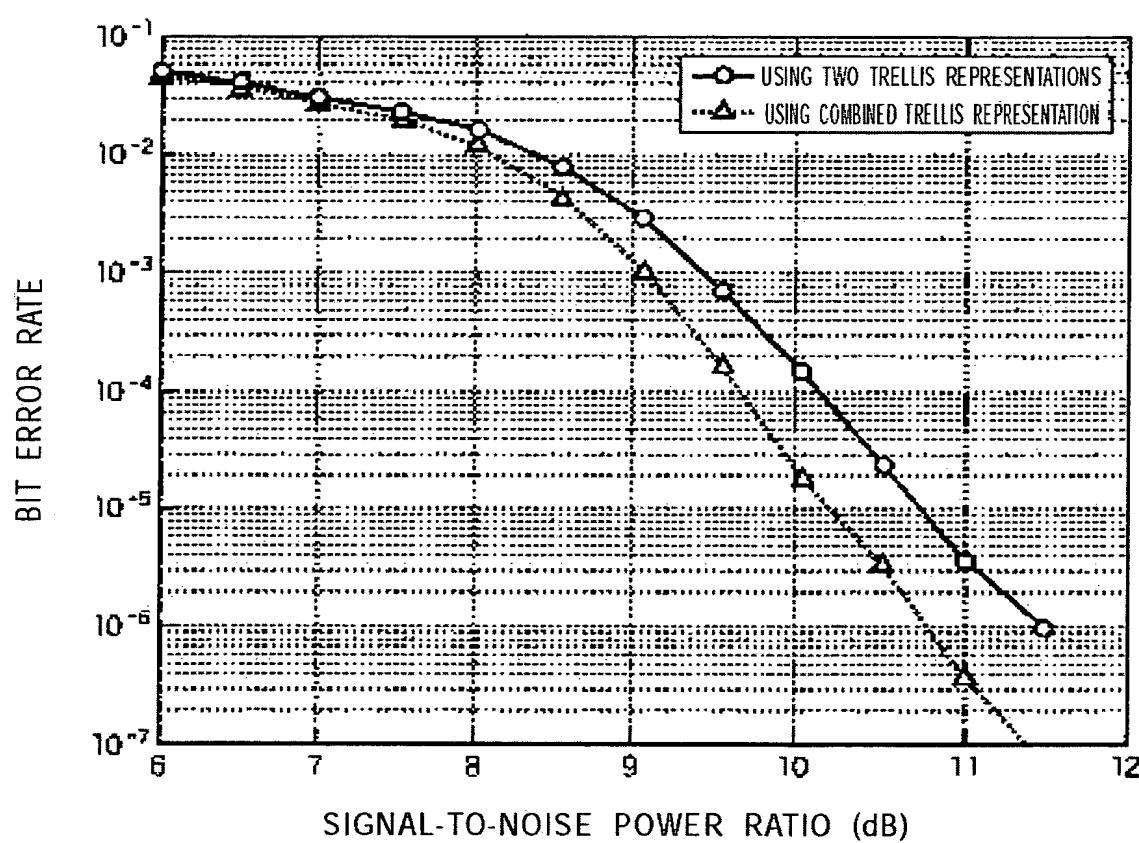


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FIG. 27



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FIG. 28

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT	CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
(0, 1)	01	(1, 0)	2,2,-2	(3, 0)	01	(11, 3)	-4,-2,2
(0, 1)	10	(0, 2)	2,4,2	(3, 0)	10	(0, 1)	-4,-4,-2
(0, 1)	00	(5, 3)	2,4,4	(3, 0)	00	(5, 0)	-4,-4,-4
(0, 1)	00	(4, 0)	2,2,-2	(3, 0)	00	(4, 3)	-4,-2,2
(0, 1)	11	(3, 3)	2,4,4	(3, 0)	11	(2, 2)	-2,2,2
(0, 1)	11	(10, 2)	2,4,2	(3, 0)	11	(10, 1)	-4,-4,-2
(0, 2)	01	(1, 3)	-2,-2,2	(3, 3)	01	(11, 0)	4,2,-2
(0, 2)	10	(0, 1)	-2,-4,-2	(3, 3)	10	(0, 2)	4,4,2
(0, 2)	00	(5, 0)	-2,-4,-4	(3, 3)	00	(5, 3)	4,4,4
(0, 2)	00	(4, 3)	-2,-2,2	(3, 3)	00	(4, 0)	4,2,-2
(0, 2)	11	(3, 0)	-2,-4,-4	(3, 3)	11	(2, 1)	2,-2,-2
(0, 2)	11	(10, 1)	-2,-4,-2	(3, 3)	11	(10, 2)	4,4,2
(1, 0)	01	(1, 3)	-4,-2,2	(4, 0)	00	(6, 3)	-2,2,4
(1, 0)	10	(0, 1)	-4,-4,-2	(4, 0)	10	(1, 0)	-4,-4,-4
(1, 0)	00	(5, 0)	-4,-4,-4	(4, 0)	11	(1, 3)	-2,2,4
(1, 0)	00	(4, 3)	-4,-2,2	(4, 3)	00	(6, 0)	2,-2,-4
(1, 0)	11	(2, 2)	-2,2,2	(4, 3)	10	(1, 3)	4,4,4
(1, 0)	11	(10, 1)	-4,-4,-2	(4, 3)	11	(1, 0)	2,-2,-4
(1, 3)	01	(1, 0)	4,2,-2	(5, 0)	00	(7, 3)	-2,2,4
(1, 3)	10	(0, 2)	4,4,2	(5, 0)	01	(1, 3)	-2,2,4
(1, 3)	00	(5, 3)	4,4,4	(5, 3)	00	(7, 0)	2,-2,-4
(1, 3)	00	(4, 0)	4,2,-2	(5, 3)	01	(1, 0)	2,-2,-4
(1, 3)	11	(2, 1)	2,-2,-2	(6, 0)	01	(1, 3)	-2,2,4
(1, 3)	11	(10, 2)	4,4,2	(6, 0)	00	(8, 3)	-2,2,4
(2, 1)	01	(11, 0)	2,2,-2	(6, 0)	00	(9, 0)	-4,-4,-4
(2, 1)	10	(0, 2)	2,4,2	(6, 3)	01	(1, 0)	2,-2,-4
(2, 1)	00	(5, 3)	2,4,4	(6, 3)	00	(8, 0)	2,-2,-4
(2, 1)	00	(4, 0)	2,2,-2	(6, 3)	00	(9, 3)	4,4,4
(2, 1)	11	(3, 3)	2,4,4	(7, 0)	11	(1, 3)	-2,2,4
(2, 1)	11	(10, 2)	2,4,2	(7, 0)	10	(8, 3)	-2,2,4
(2, 2)	01	(11, 3)	-2,-2,2	(7, 0)	10	(9, 0)	-4,-4,-4
(2, 2)	10	(0, 1)	-2,-4,-2	(7, 3)	11	(1, 0)	2,-2,-4
(2, 2)	00	(5, 0)	-2,-4,-4	(7, 3)	10	(8, 0)	2,-2,-4
(2, 2)	00	(4, 3)	-2,-2,2	(7, 3)	10	(9, 3)	4,4,4
(2, 2)	11	(3, 0)	-2,-4,-4	(8, 0)	00	(1, 3)	-2,2,4
(2, 2)	11	(10, 1)	-2,-4,-2	(8, 3)	00	(1, 0)	2,-2,-4

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FIG. 29

CURRENT-TIME STATE	CURRENT-TIME INPUT	NEXT-TIME STATE	CURRENT-TIME OUTPUT
(9, 0)	01	(1, 3)	-4,-2,2
(9, 0)	10	(0, 1)	-4,-4,-2
(9, 0)	11	(2, 2)	-2,2,2
(9, 0)	11	(10, 1)	-4,-4,-2
(9, 3)	01	(1, 0)	4,2,-2
(9, 3)	10	(0, 2)	4,4,2
(9, 3)	11	(2, 1)	2,-2,-2
(9, 3)	11	(10, 2)	4,4,2
(10, 1)	01	(12, 3)	2,4,4
(10, 2)	01	(12, 0)	-2,-4,-4
(11, 0)	01	(1, 3)	-4,-2,2
(11, 0)	10	(0, 1)	-4,-4,-2
(11, 0)	11	(13, 2)	-2,2,2
(11, 0)	00	(5, 0)	-4,-4,-4
(11, 0)	00	(4, 3)	-4,-2,2
(11, 3)	01	(1, 0)	4,2,-2
(11, 3)	10	(0, 2)	4,4,2
(11, 3)	11	(13, 1)	2,-2,-2
(11, 3)	00	(5, 3)	4,4,4
(11, 3)	00	(4, 0)	4,2,-2
(12, 0)	11	(14, 0)	-4,-4,-4
(12, 3)	11	(14, 3)	4,4,4
(13, 1)	10	(0, 2)	2,4,2
(13, 1)	00	(5, 3)	2,4,4
(13, 1)	11	(3, 3)	2,4,4
(13, 1)	11	(10, 2)	2,4,2
(13, 2)	10	(0, 1)	-2,-4,-2
(13, 2)	00	(5, 0)	-2,-4,-4
(13, 2)	11	(3, 0)	-2,-4,-4
(13, 2)	11	(10, 1)	-2,-4,-2
(14, 0)	01	(1, 3)	-4,-2,2
(14, 0)	00	(4, 3)	-4,-2,2
(14, 3)	01	(1, 0)	4,2,-2
(14, 3)	00	(4, 0)	4,2,-2

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FIG. 30

